Application No. 10/735,510   Customer No. 01933
Supplemental Amendment

Listing of Claims:

1.   (Currently Amended) A performance evaluation apparatus
comprising:

a reference-performance data supplying unit for successively
supplying reference-performance data designating a pitch of a
5   musical sound for generating a sound, a time at which a sound of
the musical sound should be generated and a time at which the
sound of the musical sound should be terminated;

an actual-performance data supplying unit for successively
supplying actual-performance data including a time of instructing
10   actual generation of a sound of a musical sound at the designated
pitch and a time of instructing actual termination of the sound
of the musical sound;

a reference on-period extracting unit for extracting a
reference on-period indicative of a period between the time at
15   which the sound of the musical sound should be generated and the
time at which the sound of the musical sound should be
terminated, based on the reference-performance data supplied from
the reference-performance data supplying unit;

a real on-period extracting unit for extracting a real
20   on-period indicative of a period between the time of instructing
actual generation of the sound of the musical sound and the time
of instructing actual termination of the sound of the musical

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sound, based on the actual-performance data supplied from the actual-performance data supplying unit;

25   a judging unit for judging whether or not the reference on-period extracted by the reference on-period extracting unit and the real on-period extracted by the real on-period extracting unit overlap with each other;

     a comparing unit for comparing the pitch of the sound

30 generated in the reference on-period extracted by the reference on-period extracting unit and the pitch of the sound generated in the real on-period extracted by the real on-period extracting unit, only when the judging unit determines that the reference on-period and the real on-period overlap with each other; and

35   an evaluation score calculating unit for ~~adding an evaluation point to~~ adjusting an evaluation score ~~when~~ in accordance with whether or not the comparing unit determines that both the pitches are the same. ~~, and for subtracting the evaluation point from the evaluation score when the comparing~~

40 ~~unit determines that both the pitches are not the same.~~

     2. (Previously Presented) The performance evaluation apparatus according to claim 1, wherein the reference-performance data supplying unit comprises:

     a performance-data memory for storing a series of data

5 including on-event data instructing initiation of sound

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generation of the musical sound at the designated pitch,

off-event data for instructing termination of the sound of the

musical sound, and a time period between the on-event and the

off-event; and

10   a reading out unit for reading out and supplying event data

corresponding to the time period from the performance-data

memory.

3.   (Currently Amended) A performance evaluation program for

causing a computer controlled performance evaluation apparatus to

execute a procedure comprising:

successively supplying reference-performance data

5   designating a pitch of a musical sound for generating a sound, a

time at which a sound of the musical sound should be generated

and a time at which the sound of the musical sound should be

terminated;

successively supplying actual-performance data including a

10   time of instructing actual generation of a sound of a musical

sound at the designated pitch and a time of instructing actual

termination of the sound of the musical sound;

extracting a reference on-period indicative of a period

between the time at which the sound of the musical sound should

15   be generated and the time at which the sound of the musical sound

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should be terminated, based on the supplied reference-performance

data;

extracting a real on-period indicative of a time period

between the time of instructing actual generation of the sound of

20   the musical sound and the time of instructing actual termination

of the sound of the musical sound, based on the supplied

actual-performance data;

judging whether or not the extracted reference on-period and

the extracted real on-period overlap with each other;

25   comparing the pitch of the sound generated in the real

on-period with the pitch of the sound generated in the reference

on-period, only when it is determined that the reference

on-period and the real on-period overlap with each other; and

~~adding an evaluation point to~~ adjusting an evaluation score

30   ~~when~~ in accordance with whether or not it is determined that both

the pitches are the same. ~~, and subtracting the evaluation point~~

~~from the evaluation score when it is determined that both the~~

~~pitches are not the same.~~

Claims 4-16 (Canceled).

17.   (Currently Amended) A performance evaluation apparatus

comprising:

a performance designating unit for designating a pitch of a

sound-generation event contained in music data and a

5   sound-generation period between a time of initiating sound

generation and a time of terminating the sound generation;

a performance detecting unit for detecting a pitch of a

performed musical sound and a time of initiating performance of

the musical sound;

10   a pitch judging unit for judging whether or not the pitch of

the performed musical sound detected by the performance detecting

unit coincides with the pitch of the sound-generation event

designated by the performance designating unit;

a timing judging unit for determining that there is a

15   coincidence in timing when one of: (i) the performance detecting

unit detects the time of initiating performance within the

sound-generation period designated by the performance designating

unit, and (ii) the performance designating unit designates the

time of initiating sound generation within a predetermined time

20   period after the time of initiating performance detected by the

performance detecting unit, and for determining that there is no

coincidence in timing when one of: (i) the performance detecting

unit does not detect the time of initiating performance within

the sound-generation period, and (ii) the performance designating

25   unit does not designate the time of initiating sound generation

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within the predetermined time period after the time of initiating

performance detected by the performance detecting unit; and

a performance evaluation unit for ~~adding an evaluation point~~

~~to the~~ adjusting an evaluation score ~~when~~ in accordance with

30   whether or not the time judging unit determines that there is a

coincidence in timing, and in accordance with whether or not the

pitch judging unit determines that the pitch of the performed

musical sound detected by the performance detecting unit

coincides with the pitch of the sound-generation event designated

35   by the performance designating unit. ~~and when the timing judging~~

~~unit determines that there is a coincidence in timing, and for~~

~~subtracting the evaluation point from the evaluation score when~~

~~the pitch judging unit determines that the pitch of the performed~~

~~musical sound detected by the performance detecting unit does not~~

40   ~~coincide with the pitch of the sound-generation event designated~~

~~by the performance designating unit or when the timing judging~~

~~unit determines that there is no coincidence in timing.~~

18.   (Previously Presented) The performance evaluation

apparatus according to claim 17, wherein the timing judging unit

judges whether or not there is a coincidence in timing for each

pitch designated by the performance designating unit when the

5   performance designating unit designates plural pitches of

sound-generation events and plural sound-generation periods.

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19.   (Previously Presented) The performance evaluation
apparatus according to claim 17, further comprising:

a time setting unit responsive to a setting operation for

10   setting a time period, and

wherein the timing judging unit determines that there is a
coincidence in timing when the performance designating unit
designates the time of initiating sound generation within the
time period set by the time setting unit.

20.   (Currently Amended) A performance evaluation program
for causing a computer controlled performance evaluation
apparatus to execute a procedure which comprises:

designating a pitch of a sound-generation event contained in

5   music data and a sound-generation period between a time of
initiating sound generation and a time of terminating the sound
generation;

detecting a pitch of a performed musical sound and a time of
initiating the performance;

10   judging whether or not the pitch of the detected musical
sound coincides with the designated pitch of the sound-generation
event;

determining that there is a coincidence in timing when one
of: (i) the time of initiating the performance is detected within

15   the designated sound-generation period, and (ii) the time of

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initiating sound generation is designated within a predetermined

time period after the time of initiating performance is detected,

and determining that there is no coincidence in timing when one

of: (i) the time of initiating the performance is not detected

20   within the designated sound-generation period, and (ii) the time

of initiating sound generation is not designated within the

predetermined time period after the time of initiating

performance is detected; and

adding an evaluation point to the adjusting an evaluation

25   score when in accordance with whether or not it is determined

that there is a coincidence in timing, and in accordance with

whether or not it is determined that the detected pitch of the

performed musical sound coincides with the designated pitch of

the sound-generation event. and when it is determined that there

30   is a coincidence in timing, and subtracting the evaluation point

from the evaluation score when it is determined that the detected

pitch of the performed musical sound does not coincide with the

designated pitch of the sound-generation event or when it is

determined that there is no coincidence in timing.

21.   (Previously Presented) A performance evaluation

apparatus comprising:

a reference-performance data supplying unit for successively

supplying reference-performance data designating a pitch of a

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5   musical sound for generating a sound, a time at which a sound of

the musical sound should be generated and a time at which the

sound of the musical sound should be terminated;

an actual-performance data supplying unit for successively

supplying actual-performance data including a time of instructing

10   actual generation of a sound of a musical sound at the designated

pitch and a time of instructing actual termination of the sound

of the musical sound;

a period setting unit for setting an evaluation period in

accordance with contents of the reference-performance data;

15   a performance data comparing unit for comparing the

reference-performance data supplied by the reference-performance

data supplying unit and the actual-performance data supplied by

the actual-performance data supplying unit within the evaluation

period set by the period setting unit;

20   a performance evaluation unit for evaluating a comparison

result output by the performance data comparison unit; and

an evaluation outputting unit for displaying an evaluation

result output by the performance evaluation unit on a display

device.

22.   (Currently Amended) The performance evaluation

apparatus according to claim 21, wherein the performance data

comparing unit comprises:

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5   a reference on-period extracting unit for extracting a
reference on-period indicative of a period between the time at
which the sound of the musical sound should be generated and the
time at which the sound of the musical sound should be
terminated, based on the reference-performance data supplied from
the reference-performance data supplying unit;

10   a real on-period extracting unit for extracting a real
on-period indicative of a period between the time of instructing
actual generation of the sound of the musical sound and the time
of instructing actual termination of the sound of the musical
sound, based on the actual-performance data supplied from the
15   actual-performance data supplying unit;

a judging unit for judging whether or not the reference
on-period extracted by the reference on-period extracting unit
and the real on-period extracted by the real on-period extracting
unit overlap with each other; and

20   a comparing unit for comparing the pitch of the sound
generated in the reference on-period extracted by the reference
on-period extracting unit and the pitch of the sound generated in
the real on-period extracted by the real on-period extracting
unit, only when the judging unit determines that the reference
25   on-period and the real on-period overlap with each other; and

wherein the performance evaluation unit ~~adds an evaluation~~
~~point to~~ adjusts an evaluation score ~~when~~ in accordance with

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whether or not the comparing unit determines that both the

pitches are the same. , and subtracts the evaluation point from

30   the evaluation score when the comparing unit determines that both

the pitches are not the same.

23. (Previously Presented) The performance evaluation

apparatus according to claim 21, wherein the period setting unit

sets the evaluation period in accordance with a number of musical

sounds contained in the reference-performance data.

24. (Previously Presented) The performance evaluation

apparatus according to claim 21, wherein the period setting unit

sets the evaluation period in accordance with a lapse of a

predetermined time period.

25. (Previously Presented) The performance evaluation

apparatus according to claim 21, wherein the period setting unit

sets the evaluation period based on identification data contained

in the reference-performance data.

26. (Previously Presented) The performance evaluation

apparatus according to claim 21, wherein the period setting unit

sets the evaluation period in accordance with a length of

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on-period of musical sound contained in the reference-performance
data.

27. (Previously Presented) The performance evaluation
apparatus according to claim 21, wherein the period setting unit
sets the evaluation period in accordance with a tempo of the
reference-performance data.

28. (Previously Presented) The performance evaluation
apparatus according to claim 21, wherein the apparatus further
comprises:

an evaluation storing unit for storing the evaluation result
5   with respect to a previous predetermined period evaluated by the
performance evaluation unit; and

a judging unit for judging whether a current evaluation
result output by the performance evaluation unit is better, the
same as or worse than the previous evaluation stored in the
10   evaluation storing unit, and for providing the judging result to
the evaluation outputting unit.

29. (Previously Presented) A performance evaluation
program for causing a computer controlled performance evaluation
apparatus to execute a procedure which comprises:

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successively supplying reference-performance data

5   designating a pitch of a musical sound for generating a sound, a

time at which a sound of the musical sound should be generated

and a time at which the sound of the musical sound should be

terminated;

successively supplying actual-performance data including a

10   time of instructing actual generation of a sound of a musical

sound at the designated pitch and a time of instructing actual

termination of the sound of the musical sound;

setting an evaluation period in accordance with contents of

the reference-performance data;

15   comparing the reference-performance data and the actual-

performance data within the set evaluation period;

evaluating a result of the comparison; and

displaying a result of the evaluation on a display device.

30.   (New) The performance evaluation apparatus according to

claim 1, wherein the evaluation score calculating unit at least

one of: (i) adds an evaluation point to the evaluation score when

the comparing unit determines that both the pitches are the same,

5   and (ii) subtracts the evaluation point from the evaluation score

when the comparing unit determines that both the pitches are not

the same.

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31.   (New) The performance evaluation program according to claim 3, wherein the evaluation score is adjusted by at least one of: (i) adding an evaluation point to the evaluation score when it is determined that both the pitches are the same, and

5   (ii) subtracting the evaluation point from the evaluation score when it is determined that both the pitches are not the same.

32.   (New) The performance evaluation apparatus according to claim 17, wherein the performance evaluation unit at least one of: (i) adds an evaluation point to the evaluation score when the pitch judging unit determines that the pitch of the performed

5   musical sound detected by the performance detecting unit coincides with the pitch of the sound-generation event designated by the performance designating unit and when the timing judging unit determines that there is a coincidence in timing, and (ii) subtracts the evaluation point from the evaluation score

10   when the pitch judging unit determines that the pitch of the performed musical sound detected by the performance detecting unit does not coincide with the pitch of the sound-generation event designated by the performance designating unit or when the timing judging unit determines that there is no coincidence in

15   timing.

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     33.   (New) The performance evaluation program according to claim 20, wherein the evaluation score is adjusted by at least one of: (i) adding an evaluation point to the evaluation score when it is determined that the detected pitch of the performed

5   musical sound coincides with the designated pitch of the sound-generation event and when it is determined that there is a coincidence in timing, and (ii) subtracting the evaluation point from the evaluation score when it is determined that the detected pitch of the performed musical sound does not coincide with the

10   designated pitch of the sound-generation event or when it is determined that there is no coincidence in timing.

     34.   (New) The performance evaluation apparatus according to claim 22, wherein the performance evaluation unit at least one of: (i) adds an evaluation point to the evaluation score when the comparing unit determines that both the pitches are the same, and

5   (ii) subtracts the evaluation point from the evaluation score when the comparing unit determines that both the pitches are not the same.

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